UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

MICHAEL PHILIP KAUFMAN, Plaintiff, v. MICROSOFT CORPORATION, Defendant.	16-CV-2880 (AKH)

PLAINTIFF'S OPPOSITION TO MICROSOFT'S MOTION FOR SUMMARY JUDGMENT OF INVALIDITY UNDER 35 U.S.C. § 112

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This is claim construction all over again. Microsoft's present motion, though styled as a motion for summary judgment on patent validity, is in reality nothing other than a wholesale effort to relitigate claim construction arguments that Microsoft lost in the Court's Markman ruling last year, which in turn are substantially the same arguments that it made and lost before the Patent Trial and Appeal Board ("PTAB") in 2017, when it sought and failed to secure institution of *inter partes* review ("IPR") of the patent asserted in this suit.

Microsoft's arguments boil down to a further claim construction, beyond the Markman ruling, which would require that each operational "mode" implemented in accordance with the patent, in a system that has a plurality of such modes, must, as a matter of claim construction, incorporate within the display for that mode, whatever it may be, each and every type of functionality that is referenced in the claims. Ancillary to this is a further restrictive construction that "corresponding display format" always means that exactly one display format is exclusively associated with exactly one mode. Neither of these interpretations are literal requirements of the claims, nor would they make sense to a person of skill in the art ("POSITA"); rather, they are constructions under which Microsoft, subsequent to the Court's claim construction ruling, would seek to redefine and narrow the patent claims in order to break them and avoid liability.

Microsoft's foundational claim construction would require absurd configurations – so much so, that they would not read on any disclosed embodiment in the patent-at-issue. Because the patent does not disclose nonsensical constructs, Microsoft argues that the '981 Patent fails to support the claims (as Microsoft would construe them), and is therefore invalid for alleged lack of an adequate written description (as well as enablement). These contentions hinge entirely on proposed additional claim constructions, based on the same arguments that Microsoft made ineffectively during the claim construction phase of this case and, earlier, before the PTAB.

Finally, Microsoft's arguments pursuant to 35 U.S.C. § 112 ¶ 6 with respect to claims 4 and 5, and the resulting allegation of patent claim indefiniteness pursuant to *Williamson v. Citrix*, are lifted from Microsoft's prior claim construction briefing and are now, as they were then, without any merit. Microsoft once again ignores claim language that imparts structure to the claimed subject matter, as well as the fact that the patent description includes complete working source code for the reference implementation described in the specification. This detailed disclosure of software code, which Microsoft once again conspicuously fails to address (or even acknowledge), goes far beyond the statutory disclosure requirements. Claims 4 and 5 are not indefinite.

In sum, the present motion consists of the same timeworn claim construction arguments presented previously, now posed as if they were further claim limitations adopted by the Court, which in fact they never were. Without the support of these additional, unwarranted claim interpretations, Microsoft's entire brief falls apart.

1. A "Corresponding" Display Format for Each Mode Does Not Mean a Distinct or Separate Display Format for Each Mode

Microsoft starts with the contention that there must be four distinct screens, each of which is associated respectively and exclusively with one of the four provided modes (create, retrieve, update, and delete – *i.e.*, "CRUD"). Microsoft's interpretation reads in a number of unwarranted additional constraints.

The language of the claims in question is:

> defining a user interface paradigm comprising a set of modes for interacting with a given database table, said modes comprising create, retrieve, update and delete, and a corresponding display format for each mode . . .

(Plaintiff's Rule 56.1 Statement of Material Facts in Opposition to Defendant's Motion for Summary Judgment of Invalidity Under 35 U.S.C. § 112 (hereinafter "R. 56.1") ¶¶ 4-6.) The contention that "corresponding" also implies unique or one-to-one correspondence has been reiterated by Microsoft at every turn. It was previously framed as a question of claim construction by the parties, with Microsoft offering a shifting approach to its proposed constructions – first attempting to include the word "distinct" in the definition (R. 56.1 ¶ 23), and then attempting to include the word "separate" in the definition. (*Id.* ¶ 24.) But there are no such words or support in the patent or file history.

Now, Microsoft simply presumes that it somehow succeeded in this construction, when it did not. In a single sentence, Microsoft states, as if referencing some Court ruling: "[i]n other words, there are four screens or window layouts: (1) for [each mode]." (Memorandum of Law in Support of Microsoft's Motion for Summary Judgment of Invalidity Under 35 U.S.C. § 112, at 12 (D.I. 89) (hereinafter "Def.'s Br." or "Microsoft's Brief") at 2.) There was never any such ruling, and Microsoft's assertion is incorrect.

As Kaufman previously argued, "corresponding" can be a one-to-one relationship, or a one-to-many relationship. (R. 56.1 ¶ 25.) But there is no requirement in the '981 Patent that "corresponding" *necessitates* a one-to-one relationship. Microsoft is trying to create such a requirement.

In prior briefing, Kaufman provided the familiar example of a book index, where each indexed term can appear on one or more corresponding pages, and multiple indexed terms could appear on any single page. There are corresponding occurrences of words on the pages and entries in the index, but there is no constraint as to whether a given word must only appear on a single page, or a given page must contain only a single index entry.

Thus, "corresponding" implies no more than "correlated" or "associated." There can be (and are, within the reference implementation) multiple displays that support the same given mode, and these all "correspond" to that mode. Likewise, there can be a single display that supports multiple modes (also as described in the specification), and that display still "corresponds" to all of these modes. Microsoft's additional alleged requirements are neither required nor justified by anything.

The '981 Patent specification makes clear, for example, that a Delete mode can be added to the example implementation described in the specification (*i.e.*, the reference implementation) "simply by adding (according to the user's access rights, potentially) another pushbutton within the Edit-mode display." (R. 56.1 ¶ 13.) This is a disclosure of at least two modes ("Update" and "Delete") in one display. The patent discloses other specific examples wherein multiple modes are implemented within the same display, such as the "modeless" user interface (*Id.* ¶ 9) which incorporates all four modes into a single display,[1] as well as display implementations with multiple personalities (*e.g.*, the "AddEditForm.jsp" implementation seen throughout the patent, which supports both "create" and "update" modes). (*Id.* ¶ 26.)

Requiring each mode to have its own distinct and dedicated display, as Microsoft seeks to do, would thus exclude even the preferred embodiment itself from the scope of the claims, because the preferred embodiment depicts displays that share modes, as well as modes that share displays. Microsoft's interpretation runs contrary to a fundamental canon of claim construction, under which there is a strong reluctance to interpret a claim in a manner that would exclude the preferred embodiment. *See Epos Techs. Ltd. v. Pegasus Techs. Ltd.*, 766 F.3d 1338, 1347 (Fed.

[1] "Modeless" here means a UI embodiment that is unified, such that the user is never required to switch display contexts in order to access various modes of operation.

Cir. 2014) ("[A] claim construction that excludes a preferred embodiment . . . is rarely, if ever correct and would require highly persuasive evidentiary support."); *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (same). Indeed, Microsoft's construction would exclude *all* disclosed embodiments.

Microsoft made this same incorrect argument to a three-judge panel of the PTAB of the Patent & Trademark Office ("PTO") in one of Microsoft's failed IPR challenges to Kaufman's asserted patent. As framed by the PTAB:

> The parties' arguments center on whether the claim language "and a corresponding display format for each mode" requires a separate or distinctive display format for each mode (one-to-one correspondence) or whether two or more modes could have a corresponding display format by sharing portions of the same display (one-to-many, or many-to-many correspondence).

(R. 56.1 ¶ 27.)

And as the PTAB correctly found, "the description of the 'DELETE capability' being implemented as a pushbutton within the Edit-mode display (Fig. 3) demonstrates that **the claimed 'corresponding display format' does not require a separate user interface for each mode**." (R. 56.1 ¶ 28 (emphasis added).)[2]

The claim language is broad enough to cover the patent's examples in which more than one mode is represented within one display, as well as those examples in which one mode is represented across multiple displays. Claims can, as these do, cover more than one example from the specification. *See, e.g.*, *Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1305

[2] At the time of the referenced decision, the PTAB operated under a different claim construction standard than the one applicable in District Court. The PTAB's decision is nevertheless highly instructive and its reasoning is completely relevant.

(Fed. Cir. 2007) (noting the impropriety of a claim reading that "would exclude several examples in the specification").

As your Honor stated, the claim language is "grammatical . . . 'corresponding' explains the different modes that preceded that word in the claims." (R. 56.1 ¶ 29.)

The '981 Patent specification discusses alternative embodiments, which are covered within the scope of the claims here. A single multifunctional screen may allow for creating, retrieving, updating, and/or deleting data within the database. There is no statement (or even suggestion) that the asserted claims exclude a "modeless" design, and indeed the specification states the opposite – that collapsing the user interface to one multifunctional screen is as much within the scope of the invention as the multi-screen embodiment described at greater length. (R. 56.1 ¶ 9.)

2. The Delete "Mode" and Delete "Capability" are the Same

The '981 Patent provides sufficient disclosure of a Delete mode. (R. 56.1 ¶¶ 13-14.) Microsoft is arguing again, as it has done both before this Court and before the PTAB, that the Delete "mode" is somehow distinct from a delete "capability." This is wrong, both under the Court's (correct) claim construction and as the PTAB found.

As the Court found in its Claim Construction Order (D.I. 69), Create, Retrieve, Update, and Delete are four modes of data operation on a database. The Delete mode is "[a] mode of user interaction through which a user may eliminate a record from a database table." (R. 56.1 ¶ 30.) This is the same thing as the delete "capability" that Microsoft is arguing, as would also be understood by a POSITA. (R. 56.1 ¶ 31.) This is the functionality allowing a user to delete data, or "eliminate a record," from a database table. That is what Delete mode is, and that is what the delete "capability" is.

The PTAB "considered [Microsoft's] position that the described 'DELETE capability' is not the same as the claimed [D]elete mode" and found these same arguments "unpersuasive." (R. 56.1 ¶ 32.)

Microsoft, both before the PTAB and now here, does not "establish persuasively how the 'DELETE capability' fails to provide the interactivity/functionality of the modes as required by the claims." (R. 56.1 ¶ 32 (quoting Decision Denying Institution of *Inter Partes* Review, IPR2017-01142, at 9).) The '981 Patent explains that the "delete capability" is not depicted separately because "the [D]elete mode could be added to another interface such as the Edit-mode display as a pushbutton." (*Id*. (citing the '981 Patent at 5:63–6:3).) As the PTAB also pointed out, "the 'DELETE capability' is described in the same section of the Specification . . . as the other modes, which further suggests that the 'DELETE capability' is indeed referring to the [D]elete mode found in the claims." (*Id*. (citing the '981 Patent at columns 5-6).) The PTAB further cited to the '981 Patent at column 6, line 4 as "describing '[a] set of rules and methods for moving among the modes' immediately after the 'DELETE capability' description." (*Id.*)

Microsoft, for its part, ignores all of these prior arguments, the Court's claim construction, and the prior finding of the PTAB – it simply repeats its same claim construction argument yet again, undeterred.

The disclosure of the Delete mode at 5:63–6:3 of the '981 Patent (quoted by Microsoft's Brief at 10) is a sufficient written description of a Delete mode – certainly sufficient to demonstrate that Kaufman, when he filed this disclosure, was in possession of the Delete mode that he claimed. (R. 56.1 ¶ 14.)

Microsoft then falls back to the argument that there is also an alleged lack of disclosure "of the functions that are to be integrated into [Delete mode]." (Def.'s Br. at 12.) Of course, the

specification's embodiment of Delete mode incorporates the described delete functionality into the Edit mode display – which display *does* in fact integrate each of the functions of representing, navigating, and managing relationships of data across tables, and enforcing referential integrity. Microsoft's counter is that Delete is a mere "sub-function integrated into another mode." (*Id.*) This last argument merely assumes the conclusion it seeks to support – that each mode must have a uniquely corresponding display. This was never the Court's construction of the claims, and there is no basis for the Court to adopt such a construction now.

3. The Displays Described in the Specification Implement the Recited Processes

At the root of Microsoft's arguments is its contention that each individual display within the user interface ("UI") of the application (as generated in accordance with the claims) needs to perform each and every one of the recited user interface processes (for representing, navigating, and managing relationships across tables).[3] This contention also has been briefed repeatedly and at length during the *Markman* phase, and has heretofore gotten nowhere. The reason this proposed construction has not gained any traction is because it is not compelled by the literal claim language, and would impose unwarranted further limitations on the claims, introducing requirements at odds with the understanding of any person of skill in the art.

The claims concern automatically generating an application for working with the data within a relational database by implementing the key operations (modes) of create, retrieve, update, and delete through a plurality of displays provided by the generated application. Rather

[3] Microsoft focuses particularly on the words "integrating into **each** said mode display" (*see, e.g.*, Def.'s Br. at 9) and seeks to argue that Kaufman would ignore the word "each." Kaufman, however, does not dispute that there are processes that must be integrated into each mode display. Rather, Kaufman asserts that the interpretational dispute concerns **which** and **how many** processes must be integrated into each mode display – a different point, as to which Microsoft offers little in the way of argument.

than restricting their working context to a single table at a time, these displays integrate functions that also recognize and respect the relationships between tables.

Microsoft argues that the claims must be construed to require nonsensical combinations of displays and functions. For example, because the Retrieve mode displays illustrated in the specification (which only *access* and *display* data) do not integrate functionality to manage relationships (which is only relevant when *adding* or *editing* data), Microsoft argues that the patent is invalid for lack of an adequate written description. The read-only Retrieve mode displays must, according to Microsoft, include such "managing" functionality (along with every other possible cross-table functionality) even though it has no use in such a display, and Microsoft argues that the failure to disclose such a pointless combination renders the patent invalid. (In fact, because managing data relationships between tables necessarily involves *changing* cross-table references within table data, the incorporation of this functionality would, by definition, introduce Update mode functionality into the Retrieve mode display – thereby contradicting Microsoft's separate (and spurious) assertion that each mode must have its own *separate* display format, and demonstrating that Microsoft's logic on these issues is not even internally consistent.)

The claims recite that the generated application "integrates into each said mode display processes for representing, navigating, and managing said relationships across tables." Microsoft would interpret this as if it read "integrates into each said mode display processes for [**each and every one of**] representing, navigating, and managing said relationships across tables." Such an interpretation injects a further constraint that does not naturally follow, nor is it expressed anywhere throughout the specification. According to Microsoft, the entire patent must fail

because it fails to support Microsoft's distorted interpretation of the claims, and therefore allegedly lacks an adequate written description of the claimed invention.

Microsoft's assumed claim construction is in error. The claim language literally states that each mode display integrates "processes," but there is no basis for arguing that any single display must exhaustively enumerate all of the functionalities from the subsequent clause.

The claims as written – and certainly, when read in light of the specification – do not require, or even expect, that every mode display incorporates every mechanism for every kind of cross-table operation. Indeed, the specification explains that:

> As the UI is rendered for any given database table, this underlying object representation is referenced, and **appropriate** components for depicting and traversing all cross table links are automatically included in the resulting display.

(R. 56.1 ¶ 33 (emphasis added).)

It is sufficient that each mode display integrates "processes" from this list, but the literal claim language does not necessitate that every mode display must integrate them all. The enumerated list of processes are thus integrated into **each** mode display mode **as is consistent with that particular mode display**. Such an interpretation does not contradict any literal claim language. It would require that processes of the type listed be integrated into "each" mode display, but does not require that each of representing, navigating, and managing must necessarily be integrated into each mode display. This interpretation makes sense in light of the specification – and the understanding of a POSITA – whereas Microsoft's interpretation does not.[4]

[4] Microsoft assumes the construction that each and every specified process must be integrated into each respective mode display, but never fully articulates a rationale for this construction.

Microsoft's attempt to read an extra limitation into the claims, so as to divorce those claims from the scope and contemplation of the written disclosure and thereby fabricate an invalidity argument, must be rejected.[5]

The thrust of Microsoft's argument, as presented, is on "each said mode display," which does not address which processes are to be integrated therein. Microsoft's Brief, at 8-9, focuses specifically on the word "each," which is recited only once in the claim clause. The recited "each" grammatically applies to the words "said mode display," which immediately follow the word "each." The recited "each," however, does *not* modify the word "processes" later in the clause, or the enumerated processes which follow. The issue is which and how many of the enumerated processes must be integrated into each of the mode displays. In this regard, Microsoft treats the language as if it read "integrates into each said mode display processes for each of representing, navigating, and managing." But the underlined addition is not present in the claim. Microsoft cites *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1374-75 (Fed. Cir. 2004), to the effect that a court will not *redraft* claims which are susceptible to only one reasonable interpretation, so as to preserve their validity. But Kaufman is not asking the Court to redraft the claims. The additional language (this second, unrecited, and underlined "each") that Microsoft wants read into the claim language is not the literal claim language. The claim language states that each mode display has processes integrated therein, not that each and every one of the enumerated processes is integrated into each and every display. Based on the argument at page 12 of its Brief, Microsoft apparently relies on the "and" conjunction to argue that "all" of the referenced processes must be incorporated into each mode display, but the mere use of the word "and" to enumerate the processes involved is not sufficient to prove this point. The word "and" only serves to define the set of processes involved, and does not amount to a further requirement that they must each be integrated into each mode display. Microsoft's argument, to read in the word "each" a second time, is an **interpretation** of the claims rather than a literal dictate of the claim words. In contrast to *Chef America*, where the court was confronting claim language "susceptible to only one reasonable interpretation," the present situation involves language that does not compel the interpretation that the challenger, Microsoft, asserts. Accordingly, how a POSITA understands such language in light of the specification is very relevant and should be considered by the Court.

[5] Microsoft's cited authority for its assumed construction, *Chef America* (*supra*), is premised on the presence of simple and unequivocal claim wording and a specification completely consistent therewith – where "nothing even remotely suggests" a contrary interpretation. *Chef America*, 358 F.3d at 1373. The *Chef America* decision has been distinguished in more than 30 subsequent decisions, including situations where, as here, the claim language left room for interpretation, and the specification supported other interpretations. *See, e.g.*, *Akzo Nobel Coatings, Inc. v. Dow Chem. Co.*, 811 F.3d 1334, 1345 (Fed. Cir. 2016); *Motorola, Inc. v. Analog Devices, Inc.*, No. 1:03-CV-131, 2004 WL 5633734, at *6 (E.D. Tex. Mar. 23, 2004) (unlike *Chef America*, "[n]othing in the specification or the prosecution history supports [the defendant's] proposed construction."). "Determining how a person of ordinary skill in the art would understand the

4. The Retrieve Mode is Sufficiently Disclosed in the '981 Patent

Retrieve mode is sufficiently disclosed in the '981 Patent. As Kaufman has previously stated, "'retrieve' interface screens" include both "browse or search screens." (D.I. 41 at 12.) These are screens that provide "[a] mode of user interaction through which a user may call up one or more records from the database," as construed by the Court. (R. 56.1 ¶ 30.) In its current brief, Microsoft argues that the browse screens lack certain functionality – more specifically, that they incorporate no mechanisms for navigating or managing relationships across tables. (Def.'s Br. at 11-12.)

As noted above, the claims as written (and certainly when read in light of the specification) do not require, or even expect, that every mode display incorporates every mechanism for every kind of cross-table operation.

Further, contrary to Microsoft's assertions, there are in fact multiple disclosures regarding cross-table navigational processes incorporated into browse displays. This is reflected, for example, in the following quotes from the specification:

- [I]t is often desirable to provide users with easy access to editing for (at least some of) the data behind the views To enable such editing access, a mechanism is provided to create a (series of) cross-referential link(s) from the individual cells (row-values) in a given column of a Browse-mode display, with each link forwarding the user to a secondary display--most commonly, to an Edit form for the underlying base-table containing that

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limitation, however, is different from rewriting the limitation." *Eidos Display, LLC v. AU Optronics Corp.*, 779 F.3d 1360, 1367-68 (Fed. Cir. 2015) ("Here, because a person of ordinary skill in the art would understand that the limitation 'a contact hole for source wiring and gate wiring connection terminals' means separate contact holes for source wiring connection terminals and gate wiring connection terminals, adopting such a construction is not rewriting the claim limitation.").

cell's value (although it is, in fact, possible to link-through to any arbitrary table, row, and column, and in any "mode")

(R. 56.1 ¶ 34.)

- For "master" tables in any master/detail relationships (as specified via the core complement of naming conventions and annotational methods, discussed below), record displays incorporate a "pseudo-field" for each associated detail-table, which indicates the number (i.e., count) of corresponding detail (or "child") records belonging to the displayed master (or "parent") record:

  > In the reference implementation, the master/detail pseudo-fields are included only for Edit-mode displays (so as to allow for streamlined system logic and, therefore, improved run-time performance)
  >
  > Alternatively, these pseudo-fields can also be (and have been, in alternate implementations) readily incorporated into the Browse-, Search-, and Add-mode displays, at the cost of added complexity in supporting views (i.e., correlated-subqueries for Browse-mode displays) and state-management logic (i.e., transitioning to Edit mode for not-yet-completed Add-mode transactions before allowing navigation to associated detail-table contexts where the user might add dependent "child" records), and the attendant performance implications . . .

  (*Id.*)

- Master/detail drill-downs generally enter the subordinate stack context in "Browse" mode . . .

  The user may always return directly to any suspended ("higher") stack-context by clicking on the corresponding stack-display entry 908. Doing so effectively "pops" the stack, and abandons any work-in-progress in all lower contexts. (For the embodiment shown in FIG. 9C, for example, clicking on "COUNTRY [EDIT]" abandons the current stack content and restores the above context exactly as originally suspended, i.e., as shown in FIG. 9B.)

(*Id.*)

Moreover, Microsoft conveniently ignores the fact that Retrieve mode comprises both browse **and** search displays, and that the latter always incorporates navigational links to related tables (as illustrated throughout the patent – see FIG. **2** and FIG. **9**D, both of which include field-label hyperlinks and dropdown selectors).

While the browse displays depicted in the '981 Patent do not disclose "managing relationships across tables," there is no requirement (nor even any reasonable basis for arguing) that they should. As noted above, relationships can only be "managed" through the creation or updating of cross-reference data. In any operational mode other than Create or Update, then, these cross-references will necessarily remain unchanged, and so the relationships they describe cannot be managed. Managing is not consistent with such a mode display and should not be understood as one of the "processes" that the claim language requires to be integrated into a Retrieve mode display.

Microsoft fails to address the inherent (and obvious) contradiction in stipulating that read-only "retrieve" displays (such as browse or search screens) must somehow incorporate functionality for "managing relationships across tables." While arguing (in the context of Delete mode) that the claims require a distinct display for each operational mode, Microsoft is arguing here that the same claims require the very opposite – that displays must implement multiple operational modes. These tortured convolutions, arising directly from Microsoft's own claim construction, highlight just how deeply flawed (and expedient) that construction really is.

Attempting to obfuscate these flaws, Microsoft misrepresents Mr. Kaufman's deposition testimony as an "admission" that what the claims recite is "not possible" or "nonsensical." The sleight of hand here is that Microsoft assumes a claim construction that suits its purpose, and

then seeks to attribute that construction to Mr. Kaufman, who actually testified to no such thing. All Mr. Kaufman said is that requiring a read-only display (like browse) to write data (by managing relationships) is nonsensical. Mr. Kaufman never agreed to or even remotely suggested Microsoft's asserted construction, and in fact he clearly described the claims otherwise, "integrating across the mode displays, because not every process is applicable to every mode." (R 56.1 ¶ 11.)[6]

The patent disclosure is completely consistent with Mr. Kaufman's understanding of the claims as reciting integration of cross-table processes into each mode display **to the extent consistent therewith**, as opposed to the integration of **each and every cross-table process** into each and every mode display. For example, the '981 Patent shows an embodiment implementing the claimed "managing" function with a dropdown control, as seen in the Add and Edit screens (for Create and Update modes) described at 5:54-56 and 6:46-7:40. (D.I. 40-6 at 41-42.) Managing is implemented in those displays. By contrast, a browse screen *per se* (which supports Retrieve mode) has no need (or even opportunity) to perform such managing, because it only retrieves data and must never change it. There is no conceivable reason why anyone designing

[6] Microsoft's Brief represents the deposition questions to Mr. Kaufman as being about "processes expressly claimed," and states that he testified some of the "claimed processes" are "simply not possible" (Def.'s Br. at 13), thereby implying that Mr. Kaufman "admitted" that there was claimed subject matter that was not supported by the specification. This is a gross misrepresentation of the testimony. Mr. Kaufman's actual testimony (*see* Ex. B (D.I. 90-2), the attorney declaration of Leah A. Edelman accompanying Microsoft's motion) is that "[the] invention requires . . . that the processes" are "integrat[ed] across the mode displays, because not every process is applicable to every mode." (R. 56.1 ¶ 11.) Microsoft mischaracterizes Mr. Kaufman's testimony as accepting Microsoft's interpretation of the claims, when in fact he clearly disputed that interpretation. It is a major premise of Microsoft's motion that the inventor somehow admitted at his deposition that the patent lacked a full written description of the claimed subject matter. But this premise is a complete fabrication, based on distorting Mr. Kaufman's testimony as to his understanding of the claims. It is Microsoft's argument, not the patent, that lacks critical support.

such a read-only screen would try to add unnecessary data-modification controls that cannot be allowed to operate. Consistent with this, Kaufman's implementations as shown in FIGs. **1**, **7**, **9**A, **9**C, and **9**E of the '981 Patent (browse displays) do not include the "dropdown" controls found in the Add and Edit screens (FIGs. **3**, **4**, **8**, and **9**B) for managing relationships – and neither do the Retrieve mode displays in Microsoft's accused implementation, for that matter. The reason, in both cases, is that it would make no sense to put data modification functionality into a screen that is just for retrieving and displaying data.

Finally, there is the "modeless" UI paradigm discussed in the patent, to which Microsoft points as reflecting an embodiment outside of the claims. The cited specification disclosure ('981 Patent at 11:18-22) (D.I. 40-6 at 44) reflects the possibility that some implementations could embody all functionality within a single screen layout ("such as a 'spreadsheet' display"). (R. 56.1 ¶ 9.) Microsoft alleges that this embodiment must be held separate and apart from the others, and outside the scope of the claims, because it would violate Microsoft's (unwarranted) "one-to-one correspondence" requirement by combining modes on a single display. But as discussed above, there is nothing in the claims or specification that imposes such a requirement for one-to-one correspondence, and thus nothing that carves such a "modeless" implementation out of these claims. There are still four modes disclosed – including Retrieve – and a corresponding display format for each mode, which just happens to be a single display that corresponds to all of these modes. While the claims do not **require** all processes on all mode displays, this is an example of such a disclosure in the patent, where each mode display (coinciding within a single screen) integrates each and every recited process. Without limiting any of the argument above, this example is sufficient in itself to rebut Microsoft's arguments, including its written description and enablement arguments, with regard to Retrieve.

5. *Williamson Argument*: No Claim Limitations are Means-Plus-Function Limitations and the Specification Provides Ample Corresponding Disclosure

Microsoft's indefiniteness arguments for claims 4 and 5 are two-pronged (and another total repeat of its prior briefing), arguing (1) that paragraph (c) in each of claims 4 and 5 constitutes a means-plus-function limitation under 35 U.S.C. § 112 ¶ 6, and then (2) that the specification lacks any corresponding structure for these limitations. But the factual record is clear that Microsoft fails on both prongs. The underlying claim limitations are not means-plus-function limitations, and moreover, even if they were, the specification provides sufficient corresponding structure.

a. Microsoft's Reliance Upon *Williamson* is Misplaced

Microsoft's indefiniteness arguments once again seek to draw upon the framework of *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015) (*en banc*). Yet *Williamson* makes clear that the limitations recited in paragraph (c) of claims 4 and 5 cannot be 35 U.S.C. § 112 ¶ 6 means-plus-function limitations, and thus Microsoft's indefiniteness arguments relying upon *Williamson* are futile.

According to 35 U.S.C. § 112 ¶ 6:

> An element in a claim for a combination may be **expressed as a means or step for** performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112 ¶ 6 (emphasis added).

Based on the above statutory language, to invoke 35 U.S.C. § 112 ¶ 6, a patentee will typically use the "means for" or "step for" language recited in the statute, which is then followed by a function without any corresponding structure recited in the claim. *Williamson* addresses the

specific issue of how a claim may be found to be within the ambit of § 112 ¶ 6, even though the claim does not use the invoking word "means."

According to *Williamson*, a word or phrase that is used as a placeholder to introduce a function, which does not in itself connote any particular structure (referred to in *Williamson* as a "nonce" word), will be treated no differently than if the claim had used the word "means" instead. *Williamson*, 792 F.3d at 1350-51. Prior to *Williamson* there was a "strong presumption" that words other than "means for" ruled out the application of § 112 ¶ 6. *Williamson* left this presumption against a "means" finding intact, but took out the "strong" characterization of the presumption. *Id.* at 1349.

Consonant with this, *Williamson* held that when "a claim term lacks the word 'means,' the presumption [*i.e.*, that § 112 ¶ 6 does not apply] can be overcome and § 112 ¶ 6 will apply *if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function*." *Id.* (internal quotations omitted) (emphasis added).

For computer-implemented inventions, such as those at issue here, corresponding "structure" for a claimed function is reflected in the recitation of an algorithm or procedure for performing the function. *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008). If a claim recites a function, and follows that recitation, within the claim, with a sufficiently definite recital of steps by which the function is carried out, then, under *Williamson* itself, the limitation should not be deemed a means-plus-function limitation.

Hence, in order to trigger "means-plus-function" treatment without "means for" claim language, it is necessary to show that the claims are written in a manner that is entirely functional – which Microsoft has not done. Such a theory can prevail where a claim recites something

general, such as, for example, "a *distributed learning control module* for receiving communications transmitted between the presenter and the audience member," as in *Williamson*. 792 F.3d at 1344 (emphasis in original). The court in *Williamson* found this claim to be purely functional:

> While portions of the claim do describe certain inputs and outputs at a very high level (e.g., communications between the presenter and audience member computer systems), **the claim does not describe how the "distributed learning control module" interacts with other components in the distributed learning control server in a way that might inform the structural character of the limitation-in-question or otherwise impart structure to the "distributed learning control module" as recited in the claim**.

Williamson, 729 F.3d at 1351 (emphasis added). The issue in *Williamson*, and cases like it, is that the claim language in question recited *what* to do, but not *how* to do it – the claims imparted little, if any, structure to invoke the desired function. As a result of this lack of structure, the presumption against finding a "means" claim without the explicit use of the word "means" was overcome. In contrast, the claims here differ because they recite not merely the function but also the underlying algorithm – that is, the underlying structure – for performing the recited function.

b. The Claims Provide Sufficient Structure beyond Merely Reciting a Function

Claims 4 and 5 recite algorithmic specifics beyond a mere recitation of function. In particular, paragraph (c) expressly recites all of the following algorithmic (*i.e.*, structural) operations:

- construct[ing] a corresponding client application [i.e., corresponding to the "data model" of a database], in which [the] client application provides a connection to [the] database;
- provid[ing] displays of the table contents of [the] database for each of [the CRUD] modes; and
- integrating into each mode display:

- processes for representing, navigating, and managing said relationships across tables,
- processes for selecting among said modes, and
- processes for navigating across said tables and interacting in accordance the selected mode with the data in the tables that are reached by said navigation;
- all while observing and enforcing relational interdependencies among data across said tables.

(*See* R. 56.1 ¶¶ 5-6.) Microsoft's analysis extends no further than to discuss the claim term "routines," stating that this is a mere "nonce" term. (Def.'s Br. at 18.) Microsoft completely ignores the above-noted structure that follows and expounds upon this purported "nonce" term. To characterize the above, highly detailed, operational recitation as a mere generic statement of a function would turn all claims in the field of software into means-plus-function claims and deprive such claims of patent protection in a manner that was never contemplated by § 112 ¶ 6 (and its statutory successor, § 112(f)). To do so in the face of claims such as these, which not only recite the "what" but also the "how," would be an improper application of 35 U.S.C. § 112 ¶ 6.

Claim language such as that reflected above goes well beyond a mere recitation of function that would justify invoking the restrictive rules for "means" claiming. Microsoft's indefiniteness argument based on § 112 ¶ 6 must accordingly be rejected.

c. Inventor Testimony Concerning "Means" Language is also Irrelevant

In support of its contention that claims 4 and 5 are subject to 35 U.S.C. § 112 ¶ 6, Microsoft rather cynically refers to the testimony of the inventor, Michael Kaufman, concerning aspects of the prosecution history, during which "means" language in the claims was removed in

favor of "machine-readable routines." (*See* Def.'s Br. at 18-19.) Mr. Kaufman testified that such changed language made no difference to him with respect to claim scope. (*Id.*; R. 56.1 ¶ 22.)[7]

Whether a technical change in claim syntax makes any difference to Mr. Kaufman is simply irrelevant to the *legal* issue of whether or not claim language falls within the ambit of 35 U.S.C. § 112 ¶ 6. "The determination of the claimed function and corresponding structure of a means-plus-function claim limitation *is a question of law*." *AllVoice Computing PLC v. Nuance Commc'ns*, 504 F.3d 1236, 1240-41 (Fed. Cir. 2007) (internal quotations and citations omitted) (emphasis added). Mr. Kaufman is not a patent attorney, nor is he versed in the intricacies of claim construction or the requirements or meaning of means-plus-function claims. (R. 56.1 ¶ 22 (Mr. Kaufman is not "familiar with the way in which [means plus function] claims are construed in accordance with patent law.").) He is thus not an expert to opine on this legal issue and his testimony on this point is therefore irrelevant.

Microsoft frames Mr. Kaufman as someone of skill in the art in their questioning on this point, in order to get a nice-sounding quote. But the question goes to the legal point of means-plus-function claim construction, not any technical point that would benefit from skill in the art.

The snippet of testimony that Microsoft is attempting to use here is irrelevant to the legal question of whether any claims are subject to construction under the means-plus-function rubric, which, as demonstrated above, is not the case with claims 4 and 5 of the '981 Patent.

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[7] One could just as easily argue that the change in language was on purpose, and was meant to specifically avoid construction pursuant to means-plus-function.

d. The Specification Provides Full Disclosure of Detailed Algorithms for Carrying Out the Claimed Operations

Even if the Court were to treat the argued claim language as means-plus-function language (which would be erroneous), the specification contains complete disclosure for how to perform the claimed operations.

The principles discussed above for sufficient structure within the claim itself so as to avoid construction pursuant to Section 112 ¶ 6 apply with respect to the adequacy of corresponding specification disclosure for a claim determined to be in means-plus-function form. "Structure disclosed in the specification qualifies as 'corresponding structure' if the intrinsic evidence clearly links or associates that structure to the function recited in the claim." *Williamson*, 792 F.3d at 1352. In the case of a software-related invention, the "corresponding structure" consists of the algorithms disclosed in the specification, and in the case of a claim to a computer for carrying out the function, the corresponding structure is a computer programmed to implement an algorithm that performs the claimed function. *Finisar*, 523 F.3d at 1340. As a result, "the patent must disclose, at least to the satisfaction of one of ordinary skill in the art, enough of an algorithm to provide the necessary structure under § 112, ¶ 6." *Id.* The Court should find a means-plus-function limitation indefinite only "if a person of ordinary skill in the art would be unable to recognize the structure in the specification and associate it with the corresponding function in the claim." *AllVoice*, 504 F.3d at 1240-41 (internal quotations and citations omitted).

Further, "[f]or computer-implemented procedures, the computer code is not required to be included in the patent specification." *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1385 (Fed. Cir. 2011). Instead, the patentee may "express that procedural algorithm in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any

other manner that provides sufficient structure." *Id.* Courts have held time and again that this disclosure need not be exhaustive to the last conceivable detail, since "the patent need only disclose sufficient structure for a person of skill in the field to provide an operative software program for the specified function." *Id.*; *see also Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1338 (Fed. Cir. 2008) ("Detector," which corresponded to claim limitation, and was illustrated in a figure as a "black box" without depicting its internal structure, did not constitute insufficient disclosure where evidence showed that technology to perform the function of the detector would have been known); *Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003) (how to modify disclosed "core logic" on the circuitry level to perform claimed "Fast Write" may properly be left to the knowledge of those skilled in the art, and need not be specified in the patent).

Nevertheless, the patent specification in this case literally includes the complete computer source code for implementing the reference implementation. That code goes on for hundreds of columns (cols. 27-340 and 347-376).

Without any analysis or reference of the actual claim language at issue or the corresponding disclosure in the specification, other than to vaguely refer to "the same reasons recited above," Microsoft conclusorily states that "the corresponding specification of the '981 patent fail [sic] to disclose sufficiently definite structure for performing the recited functions in limitation (c)." (Def.'s Br. at 19.) The record makes clear, however, that Microsoft is simply being willfully blind.

There exists ample evidence in the record showing clear support for all claim limitations in the specification. For example, the inventor, Michael Kaufman, testified in his deposition that a POSITA could readily implement all features recited in the claims from the code and

descriptions in the specification. (R. 56.1 ¶ 37.) In accord with this testimony, the declaration of Prof. Shasha submitted along with Kaufman's *Markman* brief explained, with direct support from the specification's source code, how each claimed operation is detailed in algorithms set forth in the source code. (R. 56.1 ¶ 38.) Prof. Shasha not only provided reasoned explanation, but tied it to a working example generated by the very source code contained in the specification. (*Id*.) The functionality of the working example flows from the instructions in the source code, understandable to a person of ordinary skill in the art, which is within the four corners of the specification. Microsoft ignores all of this record evidence and merely cites to "reasons recited above."

e. Sufficient Structure for Delete Mode is Provided in the Specification

Microsoft's bald assertion that "[t]here is no disclosure at all of the so-called delete mode" is flatly contradicted by Microsoft's own statement of undisputed facts (R. 56.1 ¶ 13) and this Court's claim construction holding for the term "mode." The Court found that "mode" means "[a] manner of interacting with a computer program to accomplish a given task." (R. 56.1 ¶ 30.) More specifically, the Court found that "delete mode" means "[a] mode of user interaction through which a user may eliminate a record from a database table." (*Id*.)

As noted in Microsoft's Rule 56.1 Statement, the '981 Patent discloses that:

> DELETE capability is also readily incorporated—as either (or both) true record-removal from the underlying table, and/or record "flagging" for UI suppression (with continued underlying-table record retention)—simply by adding (according to the user's access rights, potentially) another pushbutton within the Edit-mode display.

(R. 56.1 ¶ 13.)

A pushbutton is a "manner of interacting with a computer program to accomplish a given task," and thus constitutes a "mode" as construed by the Court – in this case, a "delete"

capability, and thus a "Delete mode." The specification then provides the algorithm for performing this delete capability: by either (1) removal of the record from the underlying table, or (2) flagging the underlying table/record for user-interface suppression. (*Id.*) This structure clearly corresponds to the "Delete mode" as set forth in the claims and construed by the Court, and further provides the algorithmic structure for achieving this functionality. Indeed, the fact that the specification contemplated a "Delete mode" is further evidenced in FIGs. **5**C and **7** of the patent, in which flags related to record deletion are disclosed, including a "CAN_DELETE_FLAG" in FIG. **5**C and a "Can Delete" column heading in FIG. **7**. (R. 56.1 ¶ 14.)

The unrebutted evidence of record makes clear that this disclosure in the '981 Patent both establishes possession of the "Delete mode" at the time of filing of the '981 Patent, and also enables a POSITA to make and use same, thus satisfying both the written description and enablement prongs of 35 U.S.C. § 112. (R. 56.1 ¶ 14.) Mr. Kaufman, in testimony that Microsoft makes no attempt to rebut, stated that coding a "Delete mode" as described in the specification, given the exhaustive disclosure already present of the surrounding programming as well as the Edit mode display and the explicit suggestion of how to add Delete to that display, constitutes a *trivial* modification for any POSITA. (*Id.*) This is unrebutted evidence of enablement. Microsoft's handwringing with respect to a perceived lack of source code for the "delete mode" is off-base, since "computer code is not required to be included in the patent specification," the patentee instead being free to "express that procedural algorithm in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure," as the unrebutted record clearly establishes here. *Typhoon*, 659 F.3d at 1385.

* * *

In sum, it would be erroneous to find the claims here indefinite, based separately on (1) the patent claim language at issue is not subject to construction under § 112 ¶ 6, and (2) even if the language were subject to such construction, the detailed disclosures in the specification clearly provide sufficient structure such that the claims are definite.

CONCLUSION

For the foregoing reasons, Microsoft's motion for summary judgment should be denied. There is sufficient written description and enablement of the claims of the '981 Patent and none of the claims is subject to means-plus-function construction pursuant to 35 U.S.C. § 112 ¶ 6 and, even if they were, the specification provides sufficient structure for the claims.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on the 26th day of February, 2019, a true and correct copy of the foregoing Plaintiff's Opposition to Microsoft's Motion for Summary Judgment of Invalidity Under 35 U.S.C. § 112 was electronically filed with the Clerk of the Court using the CM/ECF system, which will send notification of such filing to all attorneys of record.

/s/ Ronald Abramson
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